

7. Superposition steering system according to one of the preceding claims, characterized in that only one hydrodynamic steering coupling (13) is provided and a first mechanical coupling (15), by means of which the zero shaft (10) can be directly driven, and another mechanical coupling (16), by means of which the zero shaft (10, 10') can be driven via a reversing gear (19) in the reverse direction rotation.

8. Superposition steering system according to one of the preceding claims, characterized in that the steering unit can be integrated with a vehicle gear (1) or can be connected downstream from a vehicle gear (1) as a separate subassembly.

9. Superposition steering system according to one of the preceding claims, characterized in that the electric motor(s) (2, 2'), the steering hydrodynamics (4, 6, 13), and the couplings (5, 7, 15, 16) are connected with the zero shaft (10, 10'), with nonengine speed-adapting gear trains.

10. Superposition steering system according to one of the preceding claims, characterized in that the power electronics and the steering electronics for the electric motor(s) (2, 2') are located on the gearbox.

11. Superposition steering system according to one of the preceding claims, characterized in that the mechanical couplings (5, 7, 14, 15, 16) are constructed as multiple-disk clutches.

Abstract

Electrohydrodynamic superposition steering system

The invention concerns a superposition steering system for tracklaying or wheeled vehicles with nonpivoting wheels with a drive system (1) and a zero shaft (10, 10') to transfer the drive power from one drive side to the other, via at least one steering differential gear (9), wherein the zero shaft (10, 10') can be driven from a power fraction branched off from the drive system (1) and at least one electric motor (2, 2').

(Figure 1)